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Predictors of loneliness in gay, lesbian, and bisexual youth

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Predictors of loneliness in gay, lesbian, and bisexual youth

by

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A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of
MASTER OF SCIENCE

Major: Psychology

Program of Study Committee:
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2008

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Abstract

This study examined predictors of loneliness in a sample of 76 gay, lesbian, or bisexual (GLB) youth living in the Midwest. Participants completed measures to assess levels of gender nonconformity, outness, positive sexual identity, victimization, perceived campus climate, social support from family, social support from GLB peers, GLB community involvement, and loneliness. Results showed that GLB peer support was the strongest predictor of loneliness, with higher levels of support predicting lower levels of loneliness. Family support was a marginally significant predictor of loneliness. Contrary to predictions, no evidence was found that social support or positive sexual identity moderated the effects of victimization or negative campus climate on loneliness. Similarly, contrary to prediction, no evidence was found that the effects of gender nonconformity or outness on loneliness were mediated by victimization or negative campus climate. Implications of this and other findings were discussed, specifically regarding GLB youth living in rural areas.

CHAPTER 1. INTRODUCTION

In addition to typical stressors faced by most youth, gay, lesbian, and bisexual (GLB) youth struggle with unique stressors related to their sexual orientation. GLB youth may feel alone or isolated for many reasons. They must come to terms with their minority sexual orientation. However, because of social stigma and fear of rejection, many GLB youth go through this process without telling others, and thus, feel alone as they work toward self-acceptance. In addition, many GLB youth face discrimination and victimization due to their sexual minority status. Being victimized serves to further isolate GLB youth from others and increases feelings of loneliness. Due to fear of disclosing their sexual minority status to family and friends, many GLB youth are unable to seek out support in dealing with victimization, further increasing risk for loneliness. In the present study, I investigated a number of factors that may affect loneliness among GLB youth. I examined risk factors that may increase loneliness, including victimization, perceived negative campus climate, gender nonconformity, and outness. In addition to risk factors, I also analyzed the effect of potential protective factors on levels of loneliness, including social support from family and GLB peers, GLB community involvement, and positive sexual identity. When GLB issues are addressed, it is not uncommon for issues affecting transgendered individuals to be included. However, I have chosen to not include transgendered individuals in the present study. There may be different factors causing loneliness in transgendered individuals, and assessing these differences is outside the scope of this study.

In the following sections, I will begin by describing the experience of loneliness, followed by a discussion of specific risk factors. These risk factors include victimization,

perceived negative campus climate, gender nonconformity, and disclosure of sexual identity. Next, I will discuss possible protective factors against loneliness. I will review relevant literature on social support from family and friends, along with research on the development of a positive sexual minority identity.

CHAPTER 2. LITERATURE REVIEW

Loneliness

Joiner (1997) defines loneliness as a feeling of interpersonal loss or deficit within an individual. Loneliness may further be described as a discrepancy between desired and actual relationships (Cacioppo, Hawkley, Crawford, Ernst, Burleson, Kowalewski, et al., 2002). According to Perlman and Peplau (1984), loneliness results from deficiencies in either quality or quantity of social relationships. The central theme in current theories of loneliness is deficits in social relationships, based on an individual's subjective perceptions.

Peplau and Perlman (1982) present a framework of loneliness with two underlying principles. First, loneliness is a reaction to levels of social connection that fall below what is desired. Second, attributions and other cognitive processes moderate the experience of loneliness. An individual's thoughts or attributions regarding lack of social connection influence the relationship between the lack of connection and loneliness. For example, if one were to attribute his or her lack of social connections to outside factors (e.g., moving to a new location), he or she may experience less loneliness than if this same individual were to attribute lack of social connections to a more stable characteristic of himself or herself (e.g., shyness).

Peplau and Perlman suggest two types of causes of loneliness. One type results from changes in the social environment that occur prior to the onset of loneliness. The other type results from predisposing factors that cause an individual to become or remain lonely over time. Both external and internal factors may play a role in the experience of loneliness among GLB individuals.

Turning first to changes in the social environment, changes may occur in an individual's social relations, such as the loss of important relationships as a result of disclosing sexual orientation. Among GLB youth, D'Augelli (2002) found that 39% of the participants reported that they had lost friends as a result of disclosing their sexual orientation. A significant association was found between the loss of friends and suicide attempts. Family members may also react negatively to the disclosure of sexual orientation. D'Augelli found that 24% of mothers were viewed as intolerant or rejecting, while 37% of fathers were perceived as intolerant or rejecting following the disclosure of their child's sexual orientation.

Additionally, once an individual is out to himself or herself, changing needs may arise from within the individual. For example, once the individual comes out, or is even perceived as GLB, he or she may be victimized. Thus, changes in loneliness may result from an increased need for social support to deal with experiences of victimization and discrimination, coming to terms with sexual identity, and other issues of coming out. These changes may lead to an imbalance between desired and actual level of social support.

Next, there are predisposing factors that are associated with loneliness. For instance, lonely people tend to be more shy, introverted, and less willing to engage in social risk-taking than non-lonely individuals (Peplau & Perlman, 1982). Other characteristics linked to loneliness such as self-deprecation and low self-esteem (Peplau & Perlman) may be especially prominent in GLB youth and young adults because of the social stigma attached to sexual minorities. In addition, an individual's level of gender nonconformity may affect social relationships. Gender nonconformity refers to the

display of characteristics and behaviors typically associated with the other sex. In a study of gay men, Landolt et al. (2004) found that gender nonconformity was significantly associated with both parental and peer rejection in childhood. Finally, similarity to others in attitudes, values, and background can affect levels of loneliness (Peplau & Perlman, 1982). Identifying differently than most on the dimension of sexual orientation may increase the likelihood of experiencing loneliness for GLB individuals. Either actual rejection, or even the fear of rejection, may lead individuals to feel isolated. A common concern for GLB youth is the lack of close friendships or the loss of such relationships (Hart & Heimberg, 2001). Lack of social support and feeling isolated are likely to cause GLB youth to experience feelings of loneliness.

Loneliness has been linked to many problems in mental health and well being, including depression (Koenig & Abrams, 1999; Mahon, Yarcheski, & Yarcheski, 2001; Russell, Peplau, & Cutrona, 1980; Weeks, Michela, Peplau, & Bragg, 1980), low self-esteem (Brage, Meredith, & Woodward, 1993; Larson, 1999) anxiety (Loucks, 1974; Perlman, Gerson, & Spinner, 1978), hostility (Moore & Sermat, 1974; Loucks, 1974), and anger and emptiness (Russell et al., 1978; Perlman et al., 1978). Depression is one of the more common mental health problems associated with loneliness (Perlman & Peplau, 1984).

Loneliness has even been associated with suicide (Nordentoft & Rubin, 1993; Roberts, Roberts, & Chen, 1998; Wenz, 1977; Perlman & Peplau, 1984). Unfortunately, many GLB youth report suicidal ideation and past suicide attempts. Compared to heterosexual peers, GLB youth are disproportionately more likely to attempt suicide (Harry, 1989; Gibson, 1989; Remafedi, French, Story, Resnick, & Blum, 1998; Garofalo,

Wolf, Kessel, Palfrey, & DuRant, 1998; Bagley & Tremblay, 1997). Garofalo et al. reported that GLB youth were three times more likely than heterosexual youth to have attempted suicide in the year prior to the survey. In a study of male twins, gay or bisexual men were six times more likely than their heterosexual twins to have attempted suicide (Herrell et al., 1999). In a sample of GLB youth, D'Augelli (2002) found that 37% of the participants reported a past suicide attempt. A significant association was found between suicide attempts and loss of friends.

Research has shown that GLB youth experience higher levels of loneliness than heterosexual youth. Martin and D'Augelli (2003) found that gay and lesbian youth scored significantly higher than heterosexual youth on a measure of loneliness. Biernbaum and Ruscio (2004) also reported higher levels of loneliness among sexual minority youth as compared to heterosexual youth. Radkowsky and Siegel (1997) additionally found that GLB adolescents are at risk for social isolation and loneliness.

Rural Issues for GLB Young Adults

Living in a rural area poses its own set of problems for GLB individuals, including facing loneliness and isolation. Although GLB young adults in general often face victimization and harassment, those living in rural areas are likely at greater risk for experiencing hostility (Foster, 1997) and isolation (Fellows, 1996). Not only are GLB individuals at higher risk for negative experiences, rural communities often lack support networks and resources for GLB individuals (Oswold & Culton, 2003; D'Augelli & Hart, 1987). Rural areas typically have few, if any, positive GLB role models (Kramer, 1995). Furthermore, being openly gay or lesbian in a rural community may actually separate one from other GLB individuals. A fear of association may cause GLB individuals who

remain closeted to shun those who are openly GLB (Oswold & Culton). The negative climate towards sexual minorities promotes concealment of one's sexual minority status. As a result, the development of support networks among GLB individuals in rural areas is hindered. Thus, rural GLB individuals may experience loneliness and isolation (D'Augelli & Hart; Haag & Chang, 1997).

Discrimination and Victimization

Individuals who identify as gay, lesbian, or bisexual often face discrimination and other negative social reactions. Evidence of this discrimination was reported by Mays and Cochran (2001), whose study showed that GLB individuals reported encountering discrimination more frequently than heterosexual individuals. Many of the GLB individuals attributed this discrimination, in whole or in part, to their sexual orientation. Controlling for level of discrimination weakened the correlation between sexual orientation and psychiatric disorders and/or mental health difficulties. This supports the likelihood that the discrimination experienced as a result of being part of a sexual orientation minority leads to mental health problems.

Victimization (verbal or physical) of GLB individuals is the most frequent type of bias-related violence (Berrill, 1990; Comstock, 1991; Finn & McNeil, 1987; Herek, 1989). GLB youth have a higher risk of being victimized than other youth, and as a result, are vulnerable to compromised mental health. Studies show that various types of victimization against GLB youth occur frequently, across both the high school and college settings, including verbal harassment, physical and sexual assaults (sometimes with weapons), and even murder (Franklin, 2000; Jackson, 1999; Pilkington & D'Augelli, 1995; Savin-Williams, 1994). Over half of the gay male youth in one study

reported verbal abuse by peers (Remafedi, 1987). Russell et al. (2001) found that sexual minority youth were more likely than heterosexual youth to have witnessed violence and to have been in fights requiring medical attention. In Massachusetts, GLB students were twice as likely (22.7%) than heterosexual youths (11.2%) to be threatened or injured with a weapon (Faulkner & Cranston, 1998). In one study, almost one third of gay male youths had suffered physical attacks from peers (Remafedi, 1987). In another study, approximately 40% of GLB youths had been physically attacked (Hunter, 1990) or experienced physical violence (Remafedi, Farrow, & Deisher, 1991). At least half of the attacks were attributed to the youths' sexual orientation (Hunter).

It has been estimated that over half of the adult GLB population has experienced some type of verbal harassment or physical violence over the course of their lives (Comstock, 1991). In a sample of gay and lesbian adults, 33-49% reportedly had been victimized as adolescents (Berrill, 1990). Another study reports that 50% of gay men and 12% of lesbian women were victimized in junior high school (Gross, Aurand, & Adessa, 1988). In high school, 59% of gay men and 21% of lesbian women experienced victimization (Gross et al.).

Unfortunately, even parents and siblings may be responsible for victimization against GLB youths (D'Augelli, Hershberger, & Pilkington, 1998). One study reported that 3% of GLB youth who disclosed their sexual orientation were thrown out of their homes (Herdt & Boxer, 1993). A more recent statistic on this could not be found by the author.

Negative Campus Climate

Campus climate refers to the overall workings of the school, college, or university and includes factors such as the social organization of the school, the system of social relations among instructors and students, and the cultural system of norms and values in the college or university (Payne & Gottfredson, 2004). Ideally, the campus climate would provide warmth, respect, and acceptance of all students; in addition, high standards would be upheld for interpersonal interactions among students, faculty, and other staff. Conversely, the lack of awareness, respect, and acceptance for GLB individuals leads to the perception of negative campus climate. At a large Midwestern university, sexual minority students rated the campus climate toward sexual minorities and the campus climate in general more negatively than heterosexual peers (Waldo, 1998).

The attitudes of faculty and their ability to intervene in incidents of GLB harassment may influence the occurrence and reactions to discrimination and victimization of GLB individuals. For example, in middle and high schools, research has demonstrated that schools are less likely to have bullying problems when teachers discuss bullying with students, recognize bullying behavior, and intervene when bullying occurs (Whitney & Smith, 1993). GLB youth report a greater sense of safety and school belonging when school personnel are supportive (Kosciw & Diaz, 2006). However, several studies showed that school environments encourage invisibility for GLB youth and allow harassment, bullying, and aggression from peers (Bontempo & D'Augelli, 2002; Garofalo, Wolf, Kessel, Palfrey, & DuRant, 1998; Hershberger & D'Augelli, 1995; Russell, Seif, & Truong, 2001). Galliher, Rostosky, and Hughes (2004) examined differences in feelings of school belonging in adolescents. They discovered that GLB youth experienced significantly lower levels of school belonging than heterosexual

adolescents. The combination of victimization and a low level of school belonging can be expected to lead, with high probability, to loneliness among GLB youth.

Disclosure

A frequent source of stress for GLB youths is negative reactions to disclosure of their sexual identity. GLB youth often worry about rejection from their family if they were to disclose their GLB status (Boxer, Cook, & Herdt, 1991). Due to fear of their parents' reactions, GLB youth often choose not to disclose their sexual orientation (D'Augelli & Hershberger, 1993; D'Augelli, Hershberger, & Pilkington, 1998). In one study, over half of the GLB youths were fearful at the thought of disclosing their sexual orientation to their families, with almost a quarter admitting that the idea was "extremely troubling" (p. 65, D'Augelli & Hershberger, 1995).

Savin-Williams (1998) reported a wide range of disclosure rates among youth in a college setting. Anywhere from 25-65% of GLB college youth chose to disclose their sexual orientation to their families. The rates of disclosure for youth participating in support groups were higher, with 60-80% reporting disclosure to family members.

It is not surprising that many GLB youth choose to remain in the closet. GLB youth report being verbally abused or even physically attacked by family members after coming out (Pilkinton & D'Augelli, 1995; D'Augelli, Hershberger, & Pilkington, 1998). GLB youth who had disclosed their sexual orientation were victimized by family members more often than those who remained in the closet (D'Augelli et al., 1998). Thus, it seems that concealment of their sexual orientation protects GLB youth from rejection, and even victimization, from family members. However, there are psychological costs associated with remaining closeted. By hiding one's sexual identity,

GLB individuals may feel as though they are living a lie which may result in psychological stress (Herek, 2003). In addition, remaining closeted may interrupt the identity formation process (Malyon, 1981).

GLB youth also fear rejection from their friends following disclosure of their sexual identity (D'Augelli & Hershberger, 1995). In a previous study by D'Augelli and Hershberger (1993), results showed that one third of the GLB youths were afraid of losing friends as a result of disclosure. While higher rates of disclosure were associated with larger peer networks, outness was also related to more friendship loss and friendship-related worry among sexual minority youth (Diamond & Lucas, 2004). Thus, the fear of rejection from friends is justified. It is not uncommon for GLB youth to lose friends as a result of disclosing their sexual identity. In one sample of GLB youth, 46% had lost friends due to disclosing their GLB status (D'Augelli & Hershberger). Among a sample of gay male adolescents, Remafedi (1987) found that 41% had experienced strong negative responses from their friends.

Thus, GLB youth encounter a difficult decision when deciding if and when to disclose their sexual orientation. Also, they must decide to whom they will disclose. The dilemma becomes whether they want to remain in the closet to preserve relationships with family and friends, or face likely rejection by coming out. Either of these choices may increase levels of loneliness among GLB youth. Zeamba (2002) found that lesbian women who had not come out to either parent experienced higher levels of loneliness than those who had disclosed their sexual identity to at least one of their parents. Furthermore, GLB youth who remain in the closet may not be able to utilize social support. For example, youth who have not disclosed their GLB identity to their parents or

friends may hide experiences of victimization due to fear of revealing their sexual orientation (Hershberger & D'Augelli, 1995). They may discount support they receive while “in the closet” because they believe the support would not remain if others knew “the real me.”

It is important to understand factors that may protect GLB youth against loneliness. In the following section, I will discuss possible protective factors, including social support from family and friends and a positive sexual identity.

Social Support

Social support may act as a buffer against the negative outcomes resulting from victimization and environmental hostility. Buffering refers to the concept of a factor, such as social support, being associated with better outcomes following stress than would result in the absence of the buffer (Cohen & Wills, 1985). The association between stress and depression, for example, is weaker when social support is high than when it is low. Social support may provide protection against the negative influence of victimization and environmental hostility. GLB youth with few support resources are especially at risk for the negative outcomes caused by victimization (Garnets, et al., 1990). Hershberger and D'Augelli (1995) found that the negative effects caused by victimization may be buffered by social support. Additionally, Swann and Spivey (2004) examined the relationship between self-esteem and lesbian identity in adolescence. Their findings suggest that belonging to a group, even if the group itself is stigmatized, may be a protective factor for self-esteem.

When compared with heterosexual youth, GLB youth report less satisfaction with their social support (Safren & Heimberg, 1999). D'Augelli and Hershberger (1995)

reported that among parents aware of their child's GLB identity, 12% of mothers and 18% of fathers were rejecting, whereas 8% of mothers and 10% of fathers were seen as intolerant (but not rejecting). Lack of support, combined with typical issues of development, increases the risk of emotional problems among GLB youth (Tharinger & Wells, 2000). Instead of providing much-needed support to GLB youth who have disclosed, parents often focus on their own adjustment to the news (Tharinger & Wells). For instance, parents may be preoccupied with how their child's sexual orientation affects their own aspirations for their child. Parents may experience a sense of loss and grief at the prospect of their child not living a heterosexual life, including getting married and having children, as parents had envisioned (Salzburg, 2004; Mahoney, 1994). In addition, many parents experience guilt after learning of their child's minority sexual orientation (Robinson, Walters, & Skeen, 1989). All of these factors may prevent parents from providing needed support to their GLB offspring.

For all youth, including GLB youth, healthy identity development depends on the stability and supportiveness of their environment (Pringle & Mallon, 2003). Gonsiorek (1988) purported that most gay and lesbian adolescents would not have greater susceptibility than adolescents in general to serious mental health problems, if able to develop within a supportive and informed environment. Support from family, and especially parents, is important (Savin-Williams, 1989). Among GLB youth, there is a need for supportive adults to facilitate healthy adolescent identity formation (Cooley, 1998; Tharinger & Wells, 2000). Schneider (1991) declared that social support from others, both GLB individuals and heterosexuals, is essential for developing and accepting a non-heterosexual identity.

Positive Sexual Identity

A positive sexual identity may serve as an additional buffer for GLB youth.

Research has shown that having a positive sexual identity provides a buffer against the effects of stress (Meyer, 2003; Hershberger & D'Augelli, 1995). Similarly, embracing a positive sexual identity may serve as a buffer against the negative impact of victimization and environmental hostility. A positive sexual identity refers to the extent to which GLB individuals accept and look favorably upon their status as a sexual minority. Recognition and acceptance of a non-heterosexual identity is a major developmental process for GLB youth (Malyon, 1981). Self-acceptance of a minority sexual orientation is associated with positive adjustment (Gonsiorek & Rudolph, 1991) and has been found to buffer against the negative effects of victimization (Hershberger and D'Augelli, 1995). This process often occurs during the early adolescent years, at an increasingly early age (Graber & Bastiani Archibald, 2001). Several theories have described this process of identity development. Initially, theories hypothesized that GLB identity formation occurs in stages, including awareness, self-labeling, community involvement and disclosure, and finally, identity integration (Levine & Evans, 1991). Alternatively, others have suggested that these stages of identity development are not always experienced in a universal order or in a linear manner (Mathay, Carol, & Schillace, 2003; Kertzner, 2001; Hershberger & D'Augelli, 1995; Graber & Bastiani Archibald, 2001; Cass, 1979). Regardless of the way in which identity formation occurs, a positive sexual identity may serve as a buffer for GLB youth against the negative impact of victimization and environmental hostility. Previous research has shown that a positive GLB identity predicts psychological well-being and positive self-perception (Crawford, Allison, Zamboni, & Soto, 2002; Frable,

Wortman, & Joseph, 1997; Kertzner, 2001) and has also been found to provide a buffer against the effects of stress (Meyer, 2003; Hershberger & D'Augelli, 1995).

CHAPTER 3. HYPOTHESES

The current study tested a set of hypotheses about factors that contribute to loneliness among GLB young adults who are currently enrolled in a college or university in the rural Midwest. Specific hypotheses are shown in Figure 1 and described below.

Hypotheses

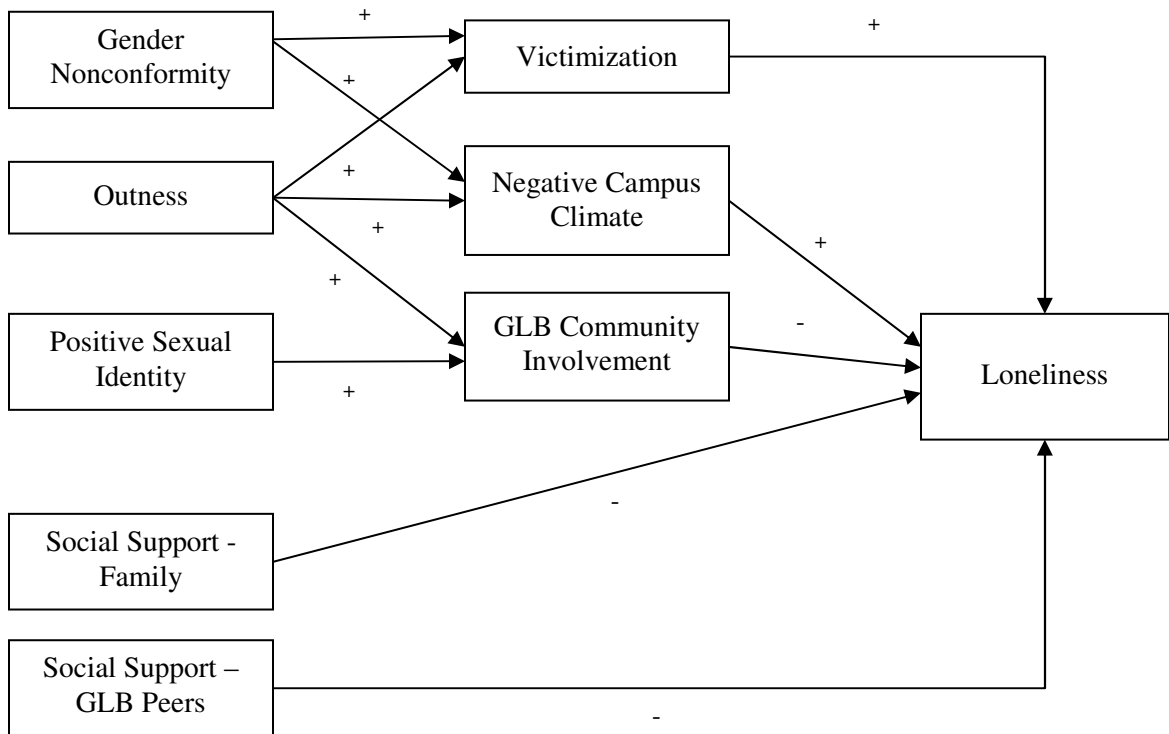


Figure 1

Risk Factors

My first hypothesis is that higher levels of gender nonconformity and outness will predict higher levels of victimization and perceived negative campus climate. GLB youth who were more open about their sexual orientation and exhibited gender-nonconforming behavior were victimized more frequently than those who were less open and displayed gender-conforming behavior (D'Augelli, Pilkington, & Hershberger, 2002). Additionally,

Huebner et al. (2004) found that gay or bisexual men with higher levels of disclosure of their sexual orientation were more likely to report experiences of discrimination and physical violence when compared to those with lower rates of disclosure.

I predict that being victimized and perceiving a negative campus climate that is hostile to GLB students and staff will make individuals feel alone. Thus, risk factors of victimization and perceived negative campus climate will predict higher levels of loneliness.

Protective Factors

Turning next to protective factors, I hypothesize that both higher levels of outness and positive sexual identity will predict greater involvement within the GLB community. If GLB individuals are open and experience positive feelings about their minority sexual orientation, I would expect them to participate in GLB gatherings and activities more than individuals who display lower levels of disclosure and self-acceptance.

I predict that participating in social interactions with similar others and receiving support from others will decrease feelings of loneliness. Thus, I predict that the protective factors of GLB community involvement and social support (from both family and GLB peers) will contribute to lower levels of loneliness among GLB young adults.

Mediation

Furthermore, I predict that gender nonconformity, outness, and positive sexual identity will be associated with level of loneliness through various mediators. Gender nonconformity will be associated with loneliness through the mediators of victimization and perceived negative campus climate. I predict that the more an individual displays gender nonconformity, the more likely he or she will be to experience victimization and

perceive a negative campus climate. In turn, the heightened victimization and perceived negative campus climate will lead to increased loneliness. Outness will be associated with loneliness, both through risk factors (victimization and perceived negative campus climate) and through the protective factor of GLB community involvement. I hypothesize that individuals who exhibit greater levels of outness will be more likely to experience victimization and perceive a more negative campus climate, which will then lead to increased levels of loneliness. However, individuals who exhibit greater levels of outness will also be more likely to participate in GLB community activities, which will lead to decreased loneliness. Finally, I hypothesize that positive sexual identity will be related to loneliness through the mediator of GLB community involvement. I predict that a more positive sexual identity will increase GLB community involvement, which in turn, will decrease loneliness.

Moderation

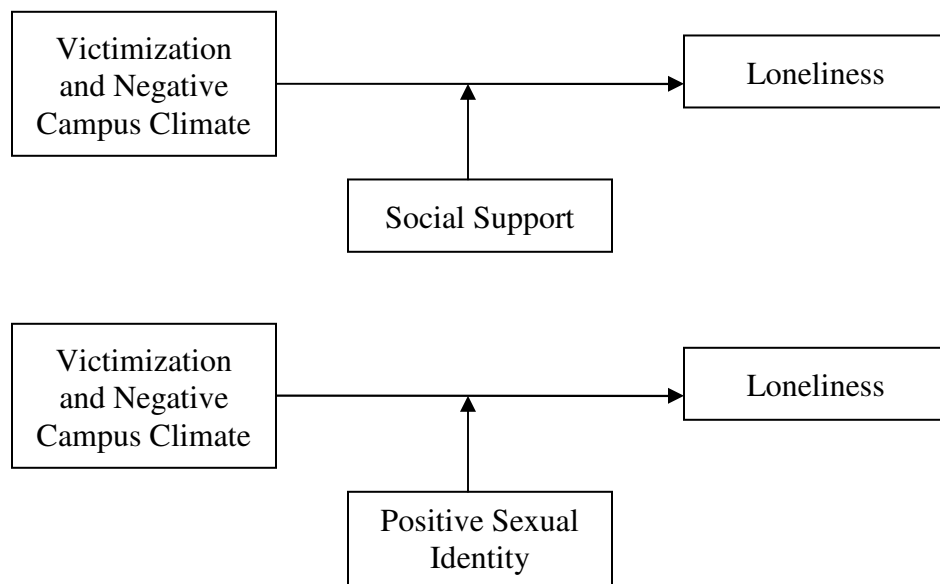


Figure 2

I further hypothesize that the effects of victimization and perceived negative campus climate on loneliness will be buffered by two protective factors: social support and a positive sexual identity (see Figure 2). The association between victimization/perceived negative campus climate and loneliness will be weaker when social support and positive sexual identity are high than when these two resource variables are low.

CHAPTER 4. METHOD

Participants

For this study, I conducted secondary data analyses on data collected by Dr. Robyn Johnson and Dr. Carolyn Cutrona. To participate in this study, participants must have reported identifying with a same-sex attraction, whether or not they identified themselves as gay, lesbian, or bisexual. Also, participants must have been between 18 and 22 years old at the time they completed the questionnaires, and must have lived outside of a major city for at least five years. This restriction was imposed because the study served as the pilot for a larger study of rural GLB young adults. For this study, a major city was defined as a city with a population of more than 100,000 people.

Participants for this study were 76 college students between the ages of 18 and 22 years old ($M=20.39$, $SD=1.39$). The majority of the participants were from Iowa. Identifying as male were 43 (56.6%) individuals, while 33 (43.4%) identified as female. In terms of sexual orientation, 39 (51.3%) participants identified as gay, 8 (10.5%) as lesbian, 24 (31.6%) as bisexual, and 5 (6.6%) as “other.” It is of interest to note that 64% of the females identified as bisexual whereas only 7% of the males identified as bisexual.

A variety of methods was used to recruit participants for this study, including GLB college listservs, recruitment flyers, advertisements in a statewide GLB newspaper, mass testing through the Department of Psychology at Iowa State University, presentations at college GLB association meetings, and word of mouth. All participants were undergraduate students enrolled in community colleges or four-year colleges or universities in Iowa, Kansas, Nebraska, South Dakota, or North Dakota.

Prior to data collection, participants were screened to confirm that they identified as gay, lesbian, bisexual, or same-sex attracted. At the time, they were given information about the study. Written informed consent was obtained for each participant. Following the initial screening, participants completed a series of questions collecting demographic data followed by a number of surveys. Most of the surveys were accessed and completed online at a time and location chosen by the participants. Some participants chose to complete paper and pencil surveys during sessions held after a local college GLB alliance meeting. The surveys took approximately 60-90 minutes total to complete, and participants received \$20 as compensation for participating.

Measures

Loneliness. The instrument that was used to measure loneliness was the UCLA Loneliness Scale (Version 3). This scale consists of 20 questions that are answered on a four-point Likert scale, with 1 being "Never" and 4 being "Always." Examples of questions include: "How often do you feel that there is no one you can turn to?", "How often do you feel that people are around you but not with you?", and "How often do you feel that there are people who really understand you?" The scale consists of ten negatively worded items and ten positively worded items intended to measure loneliness, or a deficiency in the quality or quantity of social relationships. The positively worded items are reverse coded, and the scores are then summed. Higher scores indicate higher levels of loneliness. This version of the UCLA Loneliness Scale shows high reliability. Test-retest reliability over a one-year period was .73, while internal consistency of this measure ranges from .89 to .94 (Russell, 1996). Convergent validity for this scale was demonstrated by significant correlations with other loneliness measures, such as the NYU

Loneliness Scale ($r = .65$) and the Differential Loneliness Scale ($r = .72$) (Russell, 1996). In addition, loneliness scores were negatively correlated with social support measures. Despite this correlation with social support measures, discriminant validity of this scale is supported by factor analyses performed by Russell, Kao, and Cutrona (1987) that indicated that loneliness and social support represented different factors. Construct validity was supported by significant correlations between loneliness and measures of self-esteem and depression (Russell, 1996). Russell also examined the correlation of loneliness with social desirability. Although it was found to be statistically significant, the magnitude of the relationship was low, thus providing evidence that participants' scores are not severely influenced by social desirability.

Victimization. The level of victimization participants had experienced was measured using the Gay Bashing Scale (Crawford et al., 2002). Participants answered questions about the frequency with which they encountered various types of victimization because someone thought they were lesbian, gay, or bisexual. Items included frequency of being verbally abused, physically threatened, and sexually assaulted. Participants reported how many times they had experienced each of the nine items as a result of their perceived sexual orientation in both their hometown community and their college campus or current community. Higher scores indicate higher levels of victimization. In this study, validity of this scale was evidenced by a positive correlation with minority stress ($r = .43$, $p < .01$).

Negative Campus Climate. To measure perceived negative campus climate, participants completed the LGBT Campus Climate Subscale ($\alpha = .84$ for the current sample) taken from the Campus Climate Assessment (Rankin, 2003). Validity of this

measure was demonstrated in the current study by its positive correlation with minority stress ($r = .50, p < .01$). Participants rated their level of agreement with 7 items pertaining to their campus's climate for sexual minority individuals. Examples of items include "The climate of the classes I have taken are accepting of LGBT persons," and "The college/university provides visible resources on LGBT issues and concerns." Participants rated agreement with each item on a 5-point Likert scale with 1 = *Strongly agree* and 5 = *Strongly disagree*. Higher scores indicated a more **negative** campus environment for sexual minority individuals.

Gender Nonconformity. To measure gender nonconformity, participants were asked to rate their level of agreement with four items that were written for the current study ($\alpha = .87$ for males; $\alpha = .77$ for females). These items pertained to being criticized for displaying gender-inappropriate behavior on each of four dimensions: style of dress, movements (i.e. gestures, way of walking), way of speaking, and interests and activities. Participants were to indicate their level of agreement with each item on a scale from 1 = *Strongly disagree* to 5 = *Strongly agree*. Higher scores indicated higher levels of gender nonconformity. To determine scale validity, correlations were computed with self-reported masculinity and femininity. Results of these analyses showed that, for females, level of gender nonconformity was positively associated with masculinity ($r = .59, p < .01$). For males, level of gender nonconformity was positively associated with femininity ($r = .73, p < .01$). Thus, these items appear to constitute a valid measure of gender nonconformity.

Social Support from Family. Participants' level of familial social support was measured by the Social Provisions Scale – Source Specific version (SPSSS; Cutrona &

Russell, 1987; Cutrona, 1989). The SPSSS ($\alpha = .93$ for this study) examines multiple facets of family support and demonstrates convergent and divergent validity. Twenty-four items comprise the SPSSS and assess the level of support received from the participant's mother, father, one sibling, and one extended family member. For the latter two, participants were to consider the sibling and extended family member to whom they feel closest. Participants rated their agreement with each item on a 4-point Likert scale that ranged from 1 = *Strongly disagree* to 4 = *Strongly agree*. Participants could also select *N/A – not applicable, my mother/father is deceased*, or *N/A –not applicable, I do not have siblings/relatives*. Examples of items include “I can depend on my mother to help me if I really need it,” “I can talk to my father about important decisions in my life,” “I have a close relationship with my sibling that provides me with a sense of emotional security and well-being,” and “I feel that my relative shares my attitudes and beliefs.” Higher scores represent higher levels of social support. Extensive validity information is available regarding the original Social Provisions Scale (Cutrona & Russell, 1987) and the Source Specific Social Provisions Scale (Cutrona, 1989).

Social Support from GLB Friends. Participants' support from GLB friends was measured by the Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988). The MSPSS is a 10-item measure that assesses social support from friends in the GLB community. Participants rated agreement with items on a 7-point Likert scale, with 1 = *Very strongly disagree* to 7 = *Very strongly agree*. Examples of items include “There is a special person who is around when I am in need,” and “I have friends with whom I can share my joys and sorrows.” Higher scores indicate higher levels of support from friends in the GLB community. In the current study,

validity of this measure was demonstrated by its positive correlation with involvement with the GLB community ($r = .40, p < .01$).

GLB Community Involvement. Involvement in the GLB community was assessed using the Community Involvement Scale ($\alpha = .68$ for this study). This measure requires participants to report the frequency with which they partake in activities with members of the GLB community during a typical month. Item examples include “How many times a month do you go to gay bars/dance clubs/parties?”; “How many times a month do you go to gay political meetings or rallies?”; “How many times a month do you go out to a movie or other activities with gay friends?”; and “How many times a month do you have a personal conversation on the phone with a gay friend?” A total score was calculated for each participant gauging level of involvement within the GLB community. Higher scores reflect higher level of involvement within the GLB community. In the current study, validity of this measure was demonstrated by its positive correlation with social support from GLB friends ($r = .40, p < .01$).

Minority Sexual Identity. Participants’ minority sexual identity was measured using the Positive Minority Sexual Identity Scale (Fribley et al., 2000). Participants were asked to rate three items on a Likert scale of 1 = *Disagree strongly* to 5 = *Agree strongly*. Items were “I wish I were not gay/lesbian/bisexual,” “I would not give up being gay/lesbian/bisexual even if I could,” and “I feel good about being gay/lesbian/bisexual.” The first item was reverse-coded. A mean score was calculated for each participant with a higher score indicating a more positive sexual identity. In this study, positive minority sexual identity correlated positively with scores on the Lesbian and Gay Identity Scale (r

= .61, $p < .01$). The Lesbian and Gay Identity Scale was recoded so that higher scores indicated more positive identification as a sexual minority.

Outness. The degree to which participants have disclosed their sexual identity was assessed using items from the Outness Scale/Identity Support measure (Ortiz, 2001). Items used for the outness variable asked participants whether their mother, father, and any siblings (separately) know they are gay/lesbian/bisexual. Additional items used for this variable asked participants to gauge what percentage of their extended family, close friends, and casual acquaintances know they are gay/lesbian/bisexual. Responses to each item were standardized and combined to form a single outness score for each participant, with higher scores reflecting higher levels of sexual orientation disclosure. In this study, validity of this measure was shown by positive correlations with GLB community involvement ($r = .37, p < .01$) and with GLB identity (as measured by the Lesbian and Gay Identity Scale; $r = .53, p < .01$).

Analyses

First, I computed means and standard deviations for all variables in the study. I then computed preliminary correlations to examine the relationships among all study variables. Next, I conducted a series of multiple regression analyses to test the strength of each hypothesized path in the model shown in Figure 1. Mediation predictions were tested following the procedures described by Baron and Kenny (1986). More specifically, if it were established that both the predictor and the mediator significantly predicted the outcome (i.e., loneliness), analyses would have been conducted to determine whether the strength of the association between the predictor and the outcome were significantly diminished when the mediator is added to the regression equation predicting the outcome.

To test for moderation, multiplicative interaction terms were formed by first standardizing both components of the interaction (e.g., positive minority sexual identity and victimization) and then multiplying them together. This interaction term was added to a regression equation predicting loneliness from each of the two main effects (positive minority sexual identity and victimization) followed by entry of the interaction term. If the interaction term were significant, it would indicate that the strength of the relationship between, in this case, victimization and loneliness, differed significantly as a function of level of positive minority sexual identity.

CHAPTER 5. RESULTS

Because the small sample size limited my power to detect statistically significant associations that may be important, I made the decision to report and interpret associations that were significant at the .10 level and lower.

Descriptive Statistics

Table 1

Means and Standard Deviations for All Variables for Males and Females

Variable	Males (<i>n</i> = 43 ^a)		Females (<i>n</i> = 33 ^b)	
	Mean	SD	Mean	SD
Gender Nonconformity	2.13	1.01	2.43	1.02
Outness	0.11 ^c	0.68	- 0.17 ^c	0.76
Positive Sexual Identity	3.95	0.91	4.20	0.67
Victimization	0.37	0.45	0.24	0.32
Negative Campus Climate	2.71	0.48	2.69	0.63
Social Support – Family	3.08 ^c	0.47	2.83 ^c	0.62
Social Support – GLB Peers	5.50	1.34	5.97	1.17
GLB Community Involvement	2.52	2.58	3.14	3.34
Loneliness	2.25 ^c	0.53	2.04 ^c	0.51

Note. ^aFor males, *n* = 43 except for Gender Nonconformity scale (*n* = 42). ^bFor females, *n* = 33 except for Gender Nonconformity scale (*n* = 32). ^cThese means were marginally significantly different at the *p* < .10 level. All *p*'s > .05.

Means and standard deviations were computed for each variable for males and females separately (see Table 1). There were marginally significant differences in the means between males and females on three measures. Overall, males had higher mean scores on outness, social support from family, and loneliness. However, because these

were only marginally significant, and there were no other differences between the means, males and females were not analyzed separately in the subsequent analyses.

The GLB youth in this sample suffered from a range of types of victimization because they were known or assumed to be GLB. See Table 7 for the percentages affected by victimization.

Table 7

Victimization Experienced in Hometown Community and College Campus

	Hometown Community	College Campus
Verbally abused		
One or two times	32%	41%
Three or more times	37%	15%
Threatened with physical violence	24%	13%
Had personal property destroyed	24%	14%
Had objects thrown at him/her	22%	4%
Chased or followed	12%	5%
Spat upon	5%	3%
Punched, hit, kicked, or beaten	20%	5%
Assaulted or wounded with a weapon	3%	0%
Sexually assaulted	7%	3%

Note. Except where noted for verbal abuse, all other types indicated the experience of one or more times of each type of victimization.

Due to their perceived GLB identity, approximately two-thirds of the sample experienced verbal abuse in their hometown communities and just over half experienced verbal abuse on their college campuses. In their hometown communities, twenty percent or greater were threatened with physical violence, had personal property destroyed, had objects thrown at him/her, and/or were physically abused (punched, hit, kicked, or beaten). Although reported percentages were lower for college campuses, victimization continued to be a problem for GLB youth.

Correlations

Table 2

Correlations Among All Variables (n = 76)

Variable	1	2	3	4	5	6	7	8	9
1. Gender Nonconformity	-								
2. Outness	.16	-							
3. Positive Sexual Identity	-.10	.37**	-						
4. Victimization	.24*	.16	-.05	-					
5. Negative Campus Climate	.17	-.11	.01	.11	-				
6. Family Support	-.21 ⁺	.24*	.24*	-.11	-.37**	-			
7. GLB Support	-.03	.25*	.28*	.13	-.20 ⁺	.24*	-		
8. Community Involvement	.12	.31**	.08	.34**	.00	.04	.40**	-	
9. Loneliness	.13	-.07	-.11	.11	.20 ⁺	-.33**	-.44**	-.20 ⁺	-

Note. ⁺ $p < .10$. * $p < .05$. ** $p < .01$.

Correlations were computed among all study variables (see Table 2). Gender nonconformity was significantly correlated with victimization ($r = .24, p < .05$). Thus, higher levels of gender nonconformity were related to higher rates of victimization. Gender nonconformity was also marginally negatively associated with family support ($r = -.21, p < .10$). Outness was significantly related to positive sexual identity ($r = .37, p < .01$), family support ($r = .24, p < .05$), GLB peer support ($r = .25, p < .05$), and GLB community involvement ($r = .31, p < .01$). Positive sexual identity was also significantly, positively related to support from both family ($r = .24, p < .05$) and GLB peers ($r = .28, p < .05$). Victimization was significantly correlated with GLB community involvement ($r = .34, p < .01$). Perceived negative campus climate was significantly negatively associated with family support ($r = -.37, p < .01$). Of marginal significance, perceived negative campus climate was also related to both lower support from GLB peers ($r = -.20, p < .10$) and higher levels of loneliness ($r = .20, p < .10$). Family support was significantly

associated with both higher levels of support from GLB peers ($r = .24, p < .05$) and lower levels of loneliness ($r = -.33, p < .01$). GLB peer support was strongly linked to both higher levels of GLB community involvement ($r = .40, p < .01$) and lower levels of loneliness ($r = -.44, p < .01$). Finally, GLB community involvement was marginally significantly negatively related to loneliness ($r = -.20, p < .10$).

Regressions

To test the hypothesis that higher levels of gender nonconformity and outness would be associated with higher levels of victimization and perceived negative campus climate, I conducted two separate regression analyses. Victimization was the dependent measure in the first analysis and perceived campus climate was the dependent measure in the second analysis. In both analyses, gender nonconformity and outness were entered simultaneously into the regression equations. See Tables 3 and 4 for the results of these analyses.

Table 3

Summary of Simultaneous Regression Analysis Predicting Victimization (N = 76)

Variable	B	SE B	β
Gender Nonconformity	0.09	0.05	0.22 ⁺
Outness	0.07	0.07	0.13

Note. $R^2 = .07, F(2, 73) = 2.80, p = .07$.

⁺ $p < .05$.

Table 4

Summary of Simultaneous Regression Analysis Predicting Perceived Negative Campus Climate (N = 76)

Variable	B	SE B	β
Gender Nonconformity	0.11	0.06	0.20 ⁺
Outness	-0.11	0.09	-0.15

Note. $R^2 = .05, F(2, 73) = 1.91, p = .16$.

⁺ $p < .10$.

As shown in Table 3, the overall model predicting victimization was marginally significant, $R^2 = .07$, $F(2, 73) = 2.80$, $p < .10$. Gender nonconformity was marginally significant as a predictor of victimization. Outness did not attain statistical significance as a predictor of victimization.

Turning next to predicting perceived negative campus climate, as shown in Table 4, the overall model did not attain significance, $R^2 = .05$, $F(2, 73) = 1.91$, $p = .16$. Gender nonconformity was marginally significant as a predictor of negative campus climate, while outness did not attain statistical significance as a predictor of negative campus climate.

I hypothesized that outness and a positive sexual identity would predict greater levels of GLB community involvement. As shown in Table 5, the overall model predicting community involvement was significant, $R^2 = .10$, $F(2, 73) = 3.90$, $p < .05$. Outness was significant as a predictor of GLB community involvement, although a positive sexual identity was not.

Table 5

Summary of Simultaneous Regression Analysis Predicting GLB Community Involvement (N = 76)

Variable	B	SE B	β
Outness	1.30	0.48	0.32**
Positive Sexual Identity	-0.14	0.43	-0.04

Note. $R^2 = .10$, $F(2, 73) = 3.90$, $p = .03$.

** $p < .01$.

Turning next to predictors of loneliness, I predicted that victimization and a perceived negative campus climate would predict higher levels of loneliness. In addition, I predicted that social support (from family and GLB peers) and involvement in the GLB

community would predict lower levels of loneliness. I conducted a regression analysis to predict loneliness from the aforementioned variables. The model was significant, $R^2 = .27$, $F(5, 70) = 5.25$, $p < .01$. See Table 6 for the results of this regression analysis.

Table 6

Summary of Simultaneous Regression Analysis Predicting Loneliness (N = 76)

Variable	B	SE B	β
Victimization	0.21	0.15	0.16
Campus Climate	0.03	0.11	0.03
Support – Family	-0.21	0.11	-0.22 ⁺
Support – GLB Peers	-0.15	0.05	-0.36 ^{**}
GLB Community Involvement	-0.02	0.02	-0.10

Note. $R^2 = .27$, $F(5, 70) = 5.25$, $p < .01$.

⁺ $p < .10$. ^{**} $p < .01$.

When controlling for the other variables, support from GLB peers retained statistical significance as a predictor of loneliness ($\beta = -0.36$, $p < .01$). Also in this model, support from family retained marginal statistical significance as a predictor of loneliness ($\beta = -0.22$, $p < .10$). None of the other variables was a significant predictor of loneliness.

Mediation

I hypothesized that gender nonconformity, outness, and positive sexual identity would predict loneliness through several mediators. To test these predictions, each of predictors (gender nonconformity, outness, and positive sexual identity) was first entered into a separate regression analysis to determine its ability to predict loneliness. Contrary to prediction, none of these variables was a significant predictor of loneliness (all p 's $> .10$). According to Baron and Kenny (1986), a requirement of mediation is that the

independent variable demonstrate a significant predictive relationship with the outcome variable. Because this condition was not met, tests of mediation were not conducted.

Moderation

I predicted that social support (from both family and GLB peers) would moderate the relationship between victimization and loneliness. In other words, I expected that the relationship between victimization and loneliness would be weaker if social support were high and stronger if social support were low. I tested the moderating effects of social support separately for support from family and support from GLB peers.

To test whether family support moderated the relationship between victimization and loneliness, I conducted a regression analysis. Victimization was the predictor variable, family support was the moderating variable, and loneliness was the outcome variable. Prior to the regression, I standardized family support and victimization. Next, an interaction term was formed by multiplying these two standardized variables together. In the first step of the regression, the standardized predictor (victimization) and the moderator (family social support) variables were entered. In the second step of the regression, the interaction term was entered.

If the interaction term is a significant predictor of loneliness, then the hypothesis for moderation is supported, i.e., the association between victimization and loneliness differs significantly as a function of the level of the family support. However, the interaction term in this analysis was not a significant predictor of loneliness; thus, family support did not moderate the relationship between victimization and loneliness. This procedure was repeated with social support from GLB peers replacing social support from family. In this regression, the interaction term was not a significant predictor of

loneliness; hence, social support from GLB peers did not moderate the relationship between victimization and loneliness.

I also expected both forms of social support to moderate the relationship between perceived negative campus climate and loneliness. However, the interaction term between social support and negative campus climate failed to attain significance in the prediction of loneliness for either support from family or from GLB peers.

I further predicted that positive sexual identity would moderate the relationship between victimization and loneliness. Finally, I predicted that a positive sexual identity would moderate the relationship between perceived negative campus climate and loneliness. None of the interaction terms was a significant predictor of loneliness or perceived negative campus climate; thus, none of the moderating hypotheses was supported.

CHAPTER 6. DISCUSSION

In predicting loneliness among GLB young adults, the main finding was that support from GLB peers was the strongest predictor, controlling for the other variables (victimization, perceived negative campus climate, social support from family, and GLB community involvement). GLB young adults with greater levels of social support from GLB peers were less likely to experience high levels of loneliness. Thus, GLB young adults who do not have strong support from other GLB young adults are at greater risk for loneliness, and in turn, other psychological problems. Specifically, loneliness is often linked to depression (Koenig & Abrams, 1999; Mahon, Yarcheski, & Yarcheski, 2001; Russell, Peplau, & Cutrona, 1980; Weeks, Michela, Peplau, & Bragg, 1980; Perlman & Peplau, 1984).

The young adults in this study were attending an institution of higher learning at the time of data collection. Support from GLB peers may be more accessible at this level of education compared to the support available to GLB young adults who do not attend college, especially those living in the Midwest. Furthermore, in rural areas in particular, youth in middle school or high school may have severely limited access to GLB support networks. Because support from GLB peers is important, these youth and young adults may turn to riskier alternatives for filling this void. For example, GLB youth or young adults may utilize the internet in search of connecting with others (Haag & Chang, 1997). Although the internet can be a valuable resource, it also poses a risk to young persons, especially those who are vulnerable. GLB youth who feel lonely or isolated may seek out any support they are able to find, without concern for possible negative consequences. Thus, there is a great need for the formation and/or preservation of support networks,

specifically those with connections to GLB peers. One way to form such social networks is the development and maintenance of GLB alliances in universities, community colleges, high schools, and even middle schools.

One concern related to GLB alliances from the present study is that involvement in the GLB community was related to higher levels of victimization. GLB individuals need these community resources as a means to develop relationships and support networks with other GLB young adults, but this involvement may place them at higher risk for being victimized. Promoting awareness of the experiences of sexual minorities will be an important step in creating a safe and supportive environment for GLB youth. Not only should educators and parents be informed of the issues facing sexual minority youth, but GLB issues should be incorporated into the curriculum. For example, a class on relationships should be inclusive of same-sex relationships. Ideally, there would be classes offered that focus exclusively on the experiences of GLB individuals. GLB student organizations should be developed and maintained to serve as a source of support, to provide a place to meet other GLB youth, and to advocate for GLB rights.

As well as support from GLB peers, support from family was also related to loneliness. GLB young adults who felt supported and accepted by family members were less likely to experience loneliness than those who experienced less family support. In addition to loneliness, lower family support was also related to higher levels of perceived negative campus climate. Those who have less family support were more likely to perceive their campus climate negatively. Not only do these GLB young adults lack support, they also may feel insignificant, or even undesirable, in their surroundings. Although perceived negative campus climate did not predict loneliness in the regression

analyses controlling for other predictor variables, there was a marginally significant bivariate correlation between the two variables. It may be important to explore this association in future research as power in this study was limited.

Another noteworthy finding from this study was the importance of gender nonconformity. Gender nonconformity was significantly correlated with higher levels of victimization. In the regression predicting victimization (controlling for outness), gender nonconformity attained marginal significance. This indicates that gender nonconformity is a risk factor for victimization, above and beyond outness. Similarly, in the regression predicting perceived negative campus climate (again controlling for outness), gender nonconformity retained marginal significance. Thus, individuals who display gender-nonconforming characteristics may be at higher risk for victimization and perceptions of negative campus climate. GLB individuals who display gender-nonconforming characteristics, and consequently endure victimization and perceptions of a negative environment, may be less likely to come out to others, to develop a positive sexual identity, and to form and maintain meaningful support networks.

Gender nonconformity is a risk factor not only for victimization, but also lower family support. Gender nonconformity was a significant predictor of lower levels of support from family. Thus, GLB youth who display gender nonconformity are at especially high risk for both victimization and inadequate social support from their families. The implications of this are that these young adults may be more susceptible to depression, suicidal ideation, and other mental health concerns. In addition, gender nonconforming youth may be less likely to develop a positive sexual identity and may not feel as though they can come out as a sexual minority.

In this study, outness was not significantly related to either victimization or perceived negative campus climate. Outness was, however, associated with a positive sexual identity, greater family support, and involvement in the GLB community. From these results, it appears that disclosing one's minority sexual orientation has the potential to mobilize one's social resources. Being out may provide greater access to support from both family and GLB peers. Conversely, receiving social support from family and/or GLB peers may provide an individual the courage to come out. In addition, outness may lead to greater positive sexual identity. However, another explanation for the relationship between outness and positive sexual identity may be that maintaining a positive sexual identity may actually increase the likelihood of coming out. The more positive a person's sexual identity, the more likely he or she may be to come out.

Limitations and Future Research

One limitation of this study is the small sample size. There was not enough power to detect small to medium effect sizes in the analyses. The small sample size in this study reflects one of the issues with studying this population. Because sexual minorities face discrimination, victimization, and other negative reactions, they may be less likely to come out as a sexual minority. It may be difficult to find and elicit participation from individuals who do not want their sexual minority status known.

The sampling method used to recruit participants leads to another limitation of the present study. Participants must exhibit some level of outness in order to participate in a study of GLB individuals. Most participants were recruited through their involvement with GLB alliances, whether through a mailing list or attendance at a meeting. GLB individuals who associate with a GLB alliance may be at a different stage

in their identity development than GLB individuals who do not associate with a GLB alliance. Thus, the participants in our study may have greater levels of positive sexual identity and outness than GLB young adults in general. Additionally, because of their involvement, to at least some degree, with a GLB alliance, they have the potential to receive support from GLB peers. Future research should employ sampling methods to also include participation from GLB individuals who may not be affiliated with a GLB organization, or from those who do not have access to GLB support.

Other characteristics of this study also affect its generalizability. The sample was comprised of GLB young adults living in the rural Midwest. At the time of data collection, the majority of the sample was attending a large Midwestern university. Future research should attempt to include GLB young adults not enrolled in higher education, especially those in rural areas with little to no access to GLB resources and peers.

One final limitation of the current study is that causation cannot be determined because the variables cannot (practically or ethically) be manipulated. Although relationships and predictions can be made, causal statements are beyond the realm of this area of research.

APPENDIX A: INFORMED CONSENT

Informed Consent

Title of study: The Iowa Student Study

Investigators: Robyn Johnson, Ph.D.
Carolyn E. Cutrona, Ph.D.

This is a research study. Please take your time in deciding if you would like to participate. Please feel free to ask questions at any time.

Description of Procedures

You are invited to participate in a research project. Your participation will require about 60 minutes. Participation involves answering questions on a secure website about your experiences as a lesbian, gay, bisexual, or same-sex attracted person who has lived in the Midwestern United States. The questionnaires that you complete on-line will cover a variety of topics, including your perceptions of societal attitudes toward LGB (gay, lesbian, and bisexual) persons, positive and negative experiences in your hometown, positive and negative experiences on your college campus, social support and stress in your family, personal characteristics of yourself, including self-confidence, expectations for the future, talents and achievements, career preferences and choices, identification as a gay, lesbian, or bisexual person, and involvement in social and political activities with gay, lesbian, and bisexual individuals and groups. The questionnaires will also ask about your romantic and sexual relationships, your academic and career aspirations, your mental health, and your use of alcohol and drugs.

Risks and Protections from Risk

The risks associated with participation are modest, but must be considered. First, there is some risk that you may become upset when answering questions about negative experiences you have had in your family, hometown, and campus community, especially experiences of rejection or victimization. Second, there is some risk that you may experience discomfort when answering questions about personal issues, like your romantic relationships, feelings about being gay, lesbian, or bisexual, symptoms of depression, and use of drugs and alcohol. Because you will answer all questions in privacy, on a secure website, we do not think that the questions will be very upsetting, but it is possible that you may experience some emotional discomfort.

You may skip any question that makes you uncomfortable. You may terminate your participation in the study at any time. You will suffer no negative consequences for withdrawing from the study. You will be compensated for all of the time you spent on the study before withdrawing.

If you do become upset as a result of answering any of the research questions, you may call the following number at any time (888-311-9871). This number will connect you to one of

the researchers and they will assist you in accessing any help you may require (e.g., an appointment at the Student Counseling Service).

The third risk is that somehow, participation in the study will lead to unwanted disclosure of your sexual orientation to another person or persons, although we will make every effort to make sure this does not happen. This research project will be identified in all communications with you as “The Iowa Student Study.” This includes both emails and letters. We will never discuss or disclose the nature of the study to anyone who answers the telephone when we are trying to reach you. We will never leave a message for you over the telephone.

Access to our secure website will require use of a unique password, which you will receive by email from a member of the research staff. If you forget your password, you may email the research staff and, after answering several security questions, you will be given a new password.

Benefits

As one of 500 gay, lesbian, and bisexual students who are participating in this study, you may experience a sense of inclusion and community with others who have had experiences similar to yours. Participation in the study may be beneficial to you because it will give you the opportunity to think about your experiences as a LGB person in the rural Midwest and how they have affected you. It may be beneficial for you to think about your attitudes, emotions, behaviors, and aspirations for the future.

This study also will yield benefits to knowledge and the larger society. We will learn about experiences that threaten the well-being, relationships, educational development, and career development of gay, lesbian, and bisexual students in the Midwestern United States. We will also learn about experiences that protect gay, lesbian, and bisexual students from psychological harm. This information is critically important from an intervention and policy perspective. We recognize that changes are needed at all levels of society to foster the optimal development of lesbian, gay, and bisexual youth and adults. However, we believe that our results can provide direction for prioritizing needs (e.g., work with parents of LGB youth, training high school staff, offering support services for LGB students on college campuses).

Costs and Compensation

You will be paid \$20 for participation in this research study.

Participant Rights

Your participation in this study is completely voluntary and you may refuse to participate or leave the study at any time. If you decide not to participate in the study or to leave the study early, it will not result in any penalty or loss of benefits to which you are otherwise entitled.

Confidentiality

To ensure confidentiality, the following measures will be taken. We will not attach your name to any of the information you provide us. We will assign you an identification number and only that number will be attached to your information. The list that links names to identification numbers will be stored in a locked cabinet in the research office and only Dr. Cutrona and Robyn Johnson will have access to the list. The list of names will be destroyed at the completion of data collection, no later than 12/31/2008.

If you reveal that you are a danger to yourself, we may break confidentiality. We will examine responses to questionnaire items that relate to suicidal thoughts and intentions each day of the study. If you appear to pose immediate danger to yourself, we will make every attempt to contact you by telephone and help you obtain the help you need. If the research staff believes that it is necessary to protect your life, we will contact the appropriate authorities and alert them to your imminent danger. Although we may be obliged to reveal your identity to provide protection against serious harm, we will never disclose any information to anyone about your sexual orientation.

If the results are published, your identity will remain confidential. No individual results will be published, only group averages.

Questions or Problems

You are encouraged to ask questions at any time during this study. For further information about the study, contact Robyn Johnson at (888) 311-9871 or Dr. Carolyn Cutrona at (515) 294-6784. If you have any questions about the rights of research subjects or research-related injury, please contact the Human Subjects Research Office, 1138 Pearson Hall, (515) 294-4566; austingr@iastate.edu or the Research Compliance Officer, Office of Research Compliance, 1138 Pearson Hall, (515) 294-3115; dament@iastate.edu.

SUBJECT SIGNATURE

Clicking the “Yes” button at the bottom of this screen indicates that you voluntarily agree to participate in this study, that the study has been explained to you via the information provided, and that you have been given the time to read the explanation. If you click the “Yes” button you will be directed to the actual survey.

Clicking the “No” button indicates that you do not wish to participate in the survey at this time and you will be exited from the survey.

<p style="text-align: center;">YES</p> <p style="text-align: center;">I agree to participate</p>

<p style="text-align: center;">NO</p> <p style="text-align: center;">Exit the survey</p>

APPENDIX B: UCLA LONELINESS SCALE

ID#: _____

UCLA Loneliness Scale (Version 3)

Instructions: The following statements describe how people sometimes feel. For each statement, please indicate how often you feel the way described by writing a number in the space provided. Here is an example:

How often do you feel happy?

If you never felt happy, you would respond “never”; if you always feel happy, you would respond “always”.

NEVER
1

RARELY
2

SOMETIMES
3

ALWAYS
4

1. How often do you feel that you are “in tune” with the people around you?*
2. How often do you feel that you lack companionship?
3. How often do you feel that there is no one you can turn to?
4. How often do you feel alone?
5. How often do you feel part of a group of friends?*
6. How often do you feel that you have a lot in common with the people around you?*
7. How often do you feel that you are no longer close to anyone?
8. How often do you feel that your interests and ideas are not shared by those around you?
9. How often do you feel outgoing and friendly?*
10. How often do you feel close to people?*
11. How often do you feel left out?
12. How often do you feel that your relationships with others are not meaningful?
13. How often do you feel that no one really knows you well?
14. How often do you feel isolated from others?
15. How often do you feel you can find companionship when you want it?*
16. How often do you feel that there are people who really understand you?*
17. How often do you feel shy?
18. How often do you feel that people are around you but not with you?
19. How often do you feel that there are people you can talk to?*
20. How often do you feel that there are people you can turn to?*

APPENDIX C: GAY BASHING SCALE

ID#: _____

Gay Bashing Scale (Crawford et al., 2002)

Please indicate how often you have experienced the following, because someone knew or assumed you were a lesbian, gay, or bisexual.

Circle one number for each statement.

PART I

Please answer these based on your **HOMETOWN COMMUNITY**, where you grew up. This would include your elementary, middle, and high schools.

	Never 0	Once 1	Twice 2	Three or More, If so how often
1. Been verbally abused.	0	1	2	3 (how often? _____)
2. Been threatened with physical violence.	0	1	2	3 (how often? _____)
3. Had your personal property destroyed.	0	1	2	3 (how often? _____)
4. Had objects thrown at you.	0	1	2	3 (how often? _____)
5. Been chased or followed.	0	1	2	3 (how often? _____)
6. Been spat upon.	0	1	2	3 (how often? _____)
7. Been punched, hit, kicked or beaten.	0	1	2	3 (how often? _____)
8. Been assaulted or wounded with a weapon.	0	1	2	3 (how often? _____)
9. Been sexually assaulted.	0	1	2	3 (how often? _____)

PART II - IF YOU DO NOT ATTEND SCHOOL (COLLEGE, HIGH SCHOOL) PLEASE SKIP TO PART III

Please answer these based on your **COLLEGE CAMPUS**, where you attend school.

	Never 0	Once 1	Twice 2	Three or More, If so how often
10. Been verbally abused.	0	1	2	3 (how often? _____)
11. Been threatened with physical violence.	0	1	2	3 (how often? _____)
12. Had your personal property destroyed.	0	1	2	3 (how often? _____)
13. Had objects thrown at you.	0	1	2	3 (how often? _____)
14. Been chased or followed.	0	1	2	3 (how often? _____)
15. Been spat upon.	0	1	2	3 (how often? _____)
16. Been punched, hit, kicked or beaten.	0	1	2	3 (how often? _____)
17. Been assaulted or wounded with a weapon.	0	1	2	3 (how often? _____)
18. Been sexually assaulted.	0	1	2	3 (how often? _____)

PART III – IF YOU ANSWERED BOTH PART I AND II (ABOVE) PLEASE SKIP PART III

Please answer these based on your CURRENT
COMMUNITY, where you live.

	Never	Once	Twice	Three or More, If so how often
10. Been verbally abused.	0	1	2	3 (how often? _____)
11. Been threatened with physical violence.	0	1	2	3 (how often? _____)
12. Had your personal property destroyed.	0	1	2	3 (how often? _____)
13. Had objects thrown at you.	0	1	2	3 (how often? _____)
14. Been chased or followed.	0	1	2	3 (how often? _____)
15. Been spat upon.	0	1	2	3 (how often? _____)
16. Been punched, hit, kicked or beaten.	0	1	2	3 (how often? _____)
17. Been assaulted or wounded with a weapon.	0	1	2	3 (how often? _____)
18. Been sexually assaulted.	0	1	2	3 (how often? _____)

APPENDIX D: LGBT CAMPUS CLIMATE

ID#: _____

LGBT Campus Climate

(Rankin, 2003)

Using the scale identified, please circle **ONLY ONE** answer for each statement that best represents your feelings and agreement with the statement.

	Strongly agree 1	Agree 2	Uncertain 3	Disagree 4	Strongly disagree 5
1. The College/University thoroughly addresses campus issues related to sexual orientation/gender identity.	1	2	3	4	5
2. The College/University has visible leadership from the administration regarding sexual orientation/gender identity issues on campus.	1	2	3	4	5
3. The curriculum adequately represents the contributions of LGBT persons.	1	2	3	4	5
4. The climate of the classes I have taken are accepting of LGBT persons.	1	2	3	4	5
5. The College/University provides visible resources on LGBT issues and concerns.	1	2	3	4	5
6. The College/University has a rapid response system for incidents of LGBT harassment.	1	2	3	4	5
7. The College/University has a rapid response system for incidents of LGBT discrimination.	1	2	3	4	5

APPENDIX E: PERCEIVED GENDER NONCONFORMITY

ID#: _____

Perceived Gender Nonconformity

Using the scale identified for each section, please circle **ONLY ONE** answer for each statement that best represents your feelings and agreement with the statement, based on your perception of your gender expression.

	Always masculine	Mostly masculine	Somewhat masculine	Both masculine and feminine	Somewhat feminine	Mostly feminine	Always Feminine	
	1	2	3	4	5	6	7	
Section 1								
1. The clothing I wear is stereotypically....		1	2	3	4	5	6	7
2. The way I move (gestures, way of walking, etc.) is stereotypically...		1	2	3	4	5	6	7
3. The way I speak is stereotypically...		1	2	3	4	5	6	7
4. My interests and preferred activities are stereotypically...		1	2	3	4	5	6	7

	Strongly disagree	Somewhat disagree	Neither disagree or agree	Somewhat agree	Strongly agree
	1	2	3	4	5
Section 2					
5. The clothing I wear has been criticized by others as “inappropriate” for my gender.	1	2	3	4	5
6. The way I move (gestures, way of walking, etc.) has been criticized by others as “inappropriate” for my gender.	1	2	3	4	5
7. The way I speak has been criticized by others as “inappropriate” for my gender.	1	2	3	4	5
8. My interests and preferred activities have been criticized by others as “inappropriate” for my gender.	1	2	3	4	5

APPENDIX F: SOCIAL PROVISIONS SCALE

ID#: _____

Social Provisions Scale
(Cutrona & Russell, 1987)

In answering the next set of questions, please think about your relationship with the individual(s) in each group. For example in the first 6 questions think about your relationship with your mother. In the second set of 6 questions think about your current relationship with your father. Repeat this for each group. Please rate (by circling the number) the extent to which you agree that each statement describes your current relationship with the individual.

STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	NOT APPLICABLE, my mother is deceased
1	2	3	4	5

MOTHER

- | | |
|---|-------------------|
| 1. I can depend on my mother to help me if I really need it. | 1 2 3 4 5 |
| 2. I CANNOT turn to my mother for guidance in times of stress. | 1 2 3 4 5 |
| 3. My mother recognizes my competence and skill. | 1 2 3 4 5 |
| 4. I have a close relationship with my mother that provides me with a sense of emotional security and well-being. | 1 2 3 4 5 |
| 5. I feel that my mother shares my attitudes and beliefs. | 1 2 3 4 5 |
| 6. I can talk to my mother about important decisions in my life. | 1 2 3 4 5 |

STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	NOT APPLICABLE, my father is deceased
1	2	3	4	5

FATHER

- | | |
|--|-------------------|
| 7. I can depend on my father to help me if I really need it. | 1 2 3 4 5 |
| 8. I CANNOT turn to my father for guidance in times of stress. | 1 2 3 4 5 |
| 9. My father recognizes my competence and skill. | 1 2 3 4 5 |
| 10. I have a close relationship with my father that provides me with a sense of emotional security and well-being. | 1 2 3 4 5 |
| 11. I feel that my father shares my attitudes and beliefs. | 1 2 3 4 5 |
| 12. I can talk to my father about important decisions in my life. | 1 2 3 4 5 |

STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	NOT APPLICABLE, I do not have any siblings
1	2	3	4	5

In answering the next set of questions, please think about your relationships with your siblings and please rate the extent to which you agree that each statement describes your current relationship with the “sibling to whom you feel closest.”

SIBLING

13. I can depend on my sibling to help me if I really need it. 1 2 3 4 5
14. I CANNOT turn to my sibling for guidance in times of stress. 1 2 3 4 5
15. My sibling recognizes my competence and skill. 1 2 3 4 5
16. I have a close relationship with my sibling that provides me with a sense of emotional security and well-being. 1 2 3 4 5
17. I feel that my sibling shares my attitudes and beliefs. 1 2 3 4 5
18. I can talk to my sibling about important decisions in my life. 1 2 3 4 5

STRONGLY DISAGREE	DISAGREE	AGREE	STRONGLY AGREE	NOT APPLICABLE, I do not have any relatives
1	2	3	4	5

Note: For the next set of questions, please think about the relative to whom you feel closest who is not a parent or sibling.

CLOSEST RELATIVE

19. I can depend on my relative to help me if I really need it. 1 2 3 4 5
20. I CANNOT turn to my relative for guidance in times of stress. 1 2 3 4 5
21. My relative recognizes my competence and skill. 1 2 3 4 5
22. I have a close relationship with my relative that provides me with a sense of emotional security and well-being. 1 2 3 4 5
23. I feel that my relative shares my attitudes and beliefs. 1 2 3 4 5
24. I can talk to my relative about important decisions in my life. 1 2 3 4 5

APPENDIX G: MULTIDIMENSIONAL SCALE OF PERCEIVED SOCIAL SUPPORT

ID#: _____

Multidimensional Scale of Perceived Social Support

(Zimet, Dahlem, Zimet, & Farley, 1988)

Please indicate your level of agreement with each of the following statements based on your FRIENDS IN THE LESBIAN, GAY, AND BISEXUAL COMMUNITY. Please circle the number that most closely matches your agreement with each of the following statements.

Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree
1	2	3	4	5	6	7

- | | |
|---|---------------------------|
| 1. There is a special person who is around when I am in need. | 1 2 3 4 5 6 7 |
| 2. There is a special person with whom I can share my joys and sorrows. | 1 2 3 4 5 6 7 |
| 3. My friends really try to help me. | 1 2 3 4 5 6 7 |
| 4. I get the emotional help and support I need from my friends. | 1 2 3 4 5 6 7 |
| 5. I have a special person who is a real source of comfort to me. | 1 2 3 4 5 6 7 |
| 6. I can count on my friends when things go wrong. | 1 2 3 4 5 6 7 |
| 7. I can talk about my problems with my friends. | 1 2 3 4 5 6 7 |
| 8. I have friends with whom I can share my joys and sorrows. | 1 2 3 4 5 6 7 |
| 9. There is a special person in my life who cares about my feelings. | 1 2 3 4 5 6 7 |
| 10. I have friends who are willing to help me make decisions. | 1 2 3 4 5 6 7 |

APPENDIX H: COMMUNITY INVOLVEMENT

ID#: _____

Community Involvement (Ortiz, 2001)

In a **typical month**, how many times do you participate in the following activities or go to the following places? Please write your answer in the space provided.

How many times a month do you...	How many times a month?
1. Go to gay bars/dance clubs/parties.	
2. Go to gay coffee shops/cafes.	
3. Go to gay and lesbian centers or other organized support groups or services.	
4. Go to primarily gay concerts or music festivals.	
5. Gay political meetings or rallies.	
6. Gay cultural activities (e.g., gay-themed lectures, book-readings, movies).	
7. Have dinner with gay friends.	
8. Go out to a movie or other activities with gay friends.	
9. Play sports or go to a sporting activity with gay friends.	
10. Have a personal conversation on the phone with a gay friend.	

APPENDIX I: POSITIVE MINORITY SEXUAL IDENTITY SCALE

ID#: _____

Positive Minority Sexual Identity Scale
(Frable et al., 2000)

Please circle the number that most closely matches your agreement with each of the following statements.

	Disagree Strongly 1	2	3	4	Agree Strongly 5
1. I wish I were not gay/lesbian/bisexual.	1	2	3	4	5
2. I would not give up being gay/lesbian/bisexual, even if I could.	1	2	3	4	5
3. I feel good about being gay/lesbian/bisexual	1	2	3	4	5

APPENDIX J: OUTNESS SCALE/IDENTITY SUPPORT

ID#: _____

Outness Scale/Identity Support
(Ortiz, 2001)

Please answer each statement by checking the box that matches your answer.

A. PARENTS

1. Mother

a. Are you in contact with your mother?

☐ YES If yes, how often? _____☐ NO

b. Does your mother know you are gay/lesbian/bisexual?

☐ YES☐ NO

c. If so, how supportive is she of you being gay/lesbian/bisexual?

☐ Very non-supportive☐ Somewhat non-supportive☐ Neutral☐ Somewhat supportive☐ Very supportive☐ NA, she does not know I am gay.

2. Father

a. Are you in contact with your father?

☐ YES If yes, how often? _____☐ NO

b. Does your father know you are gay/lesbian/bisexual?

☐ YES☐ NO

c. If so, how supportive is he of you being gay/lesbian/bisexual?

☐ Very non-supportive☐ Somewhat non-supportive☐ Neutral☐ Somewhat supportive☐ Very supportive☐ NA, he does not know I am gay

B. SIBLINGS

a. Do you have any brothers or sisters?

☐ YES

☐ NO

If no, skip to C

Please list how many. _____ Sisters _____ Brothers

b1. Are you in contact with any of your brother(s) and/or sister(s)?

☐ YES If yes, how often? _____

☐ NO

b2. Do any of your siblings know you are gay/lesbian/ bisexual?

☐ YES If yes, how many? _____

☐ NO

b3. Are any of them supportive of you being gay/lesbian/bisexual?

☐ YES If yes, how many? _____

☐ NO

C. EXTENDED FAMILY

1. What percentage of your EXTENDED FAMILY knows you are gay/lesbian/bisexual? Circle one.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

2. What percentage of your EXTENDED FAMILY is supportive of you being gay/lesbian/bisexual? Circle one.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

D. CLOSE FRIENDS

1. What percentage of your CLOSE FRIENDS knows you are gay/lesbian/bisexual? Circle one.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

2. What percentage of your CLOSE FRIENDS is supportive of you being gay/lesbian/bisexual? Circle one.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

E. CASUAL ACQUAINTANCES (Casual acquaintances can include employers, co-workers, or classmates.)

1. What percentage of your CASUAL ACQUAINTANCES knows you are gay/lesbian/bisexual? Circle one.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

2. What percentage of your CASUAL ACQUAINTANCES is supportive of you being gay/lesbian/bisexual? Circle one.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

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